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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,944	07/16/2003	Edward Hugh Welbon	5681-66200	8592

35690 7590 07/28/2005

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
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EXAMINER

PATEL, PARESH H

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H'A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,944	WELBON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Paresh Patel	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-13 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-13 and 15-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8-13 and 15-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Driller et al. (US 5109956) in view of Seeger, Jr. et al. (US 3861135).

Regarding claims 1, 8 and 15, Driller et al. (hereafter Driller) in fig. 3 discloses a test system comprising:

a system board (first circuit board for claim 1) [24] including a footprint pattern [14] of contacts for connection to a device under test;

a test board (second circuit board for claim 1) [25] for conveying signals output from said device under test to an analyzer [2], wherein said test board includes a corresponding footprint pattern [15] of contacts; and

an apparatus [8] positioned between said system board and said test board for conveying said signals output from said device under test from said system board to said test board;

wherein said apparatus includes;

a dielectric substrate [8] having a first side forming a first surface and a second side forming a second surface; and

a plurality of contact pins [12-13] each configured to convey a respective one of said signals between said first side and said second side;

wherein each of said plurality of contact pins extends through [see fig. 3] said dielectric substrate and protrudes beyond said first surface and said second surface; and

wherein one or more of said plurality of contact pins is formed using a pliable resistive material [12 and 13].

Driller is silent about said pliable resistive material has a resistance value **greater than five ohms**. Seeger, Jr. et al. (hereafter Seeger) in fig. 1 discloses an interconnect 40 with pliable resistive material [45, see lines 18-34 of column 3] has a resistance value **greater than five ohms** [less than 10 ohm centimeter] to obtain resistivity independent of the contact pressure (i.e. due to package and pcb). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use pliable resistive material as taught by Seeger as contact pins for Driller to obtain resistivity, independent of the contact pressure.

It would also have been obvious to one having ordinary skill in the art at the time the invention of made to use pliable resistive material has a resistance value greater than five ohms; since it was known in the art that it will help reduce noise in the circuit and also to obtain desire conductivity in the circuit (see element 54 of US Pub. 20020108778 and PTF ink of US 6108212).

Regarding claims 2 and 9, Driller in fig. 3 discloses said pliable resistive material has sufficient conductivity to convey said signals between said first side and said second side.

Regarding claims 3, 10 and 16, Driller in fig. 3 discloses said plurality of contact pins are arranged in a pattern that matches said footprint pattern of contacts on said system board and said test board.

Regarding claims 4, 11 and 17, Driller in fig. 3 discloses at least a portion of said plurality of contact pins is configured to mate to a respective contact on said system board and said test board.

Regarding claims 5, 12 and 18, Driller in fig. 2-3 discloses each of said plurality of contact pins is configured to form an electrical connection to a respective contact on each of said system board and said test board in response to said system board being positioned adjacent to said first side of said dielectric substrate and said test board being positioned adjacent to said second side of said dielectric substrate and having a compressive force [using 10] exerted on said system board and said test board causing said pliable resistive material to deform.

Here, Driller is silent about deformation of pliable resistive material. However, conductive elastomer 14 and 15 can be mounted on contacts 12 and 13 as seen in the fig. 1, which can deform. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify apparatus of fig. 2 to add conductive elastomer 14 and 15 of fig. 1, in order to insure necessary pressure between device under test and other boards during testing.

Regarding claims 6, 13 and 19, Driller at lines 26-34 of column 5 discloses said pliable resistive material includes a carbon based polymer [carbon-enriched polyurethanes].

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-6, 8-13 and 15-19 have been considered but are moot in view of the new ground(s) of rejection.

With respect to Lach reference Applicant argument are not persuasive because length of the contact pin as argued, is not found in the claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 571-272-1968. The examiner can normally be reached on 8:00 to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



July 22, 2005

Paresh Patel  
Primary Examiner  
Art Unit 2829